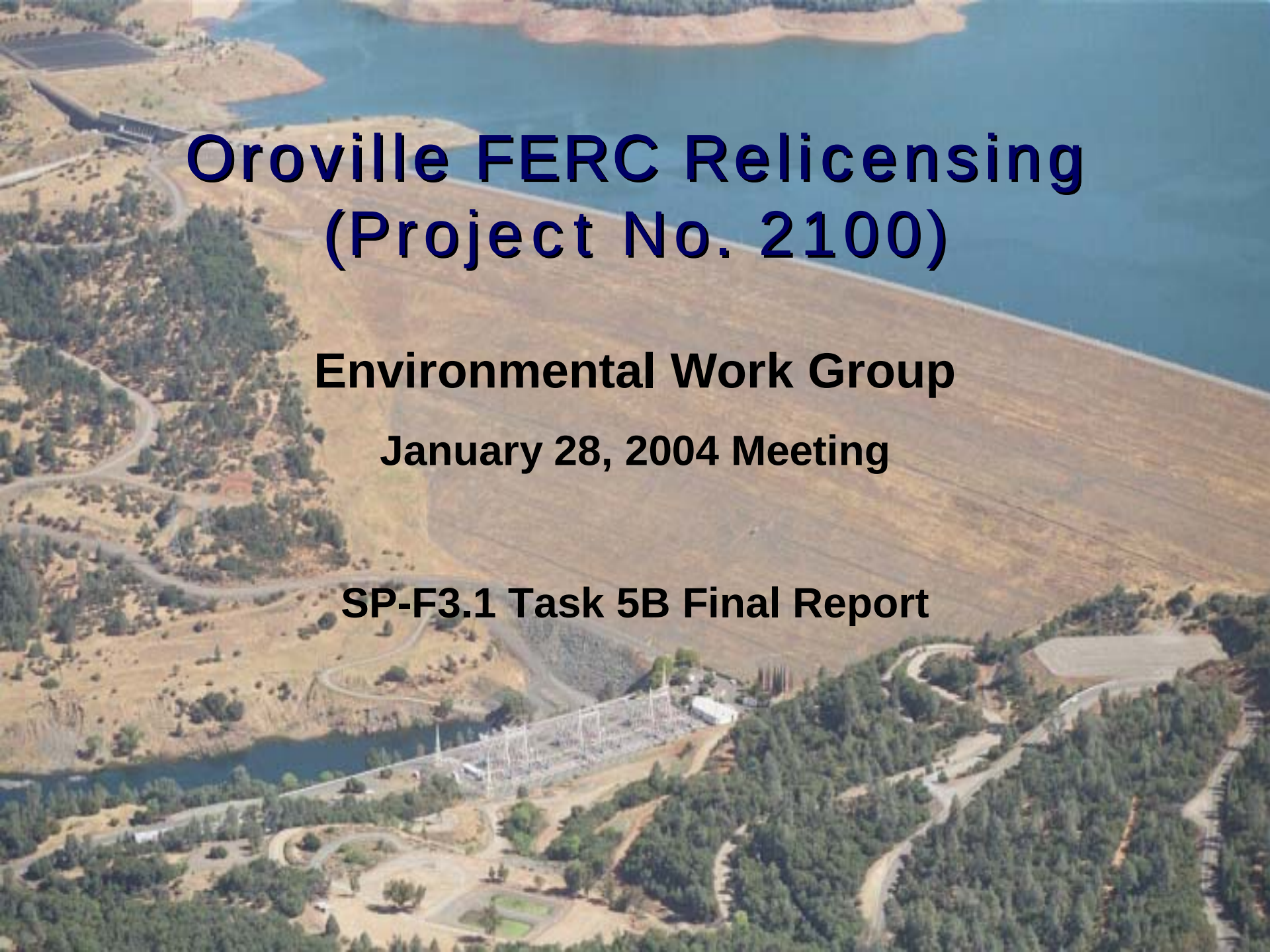


Oroville FERC Relicensing (Project No. 2100)

Environmental Work Group

January 28, 2004 Meeting

SP-F3.1 Task 5B Final Report

Characterization of Fish Habitat in One-Mile Pond

SP-F3.1 Task 5B Final Report

Study Objectives

- **Characterize One-Mile Pond Fish Habitat**
- **Determine Habitat Suitability**

Need for Study

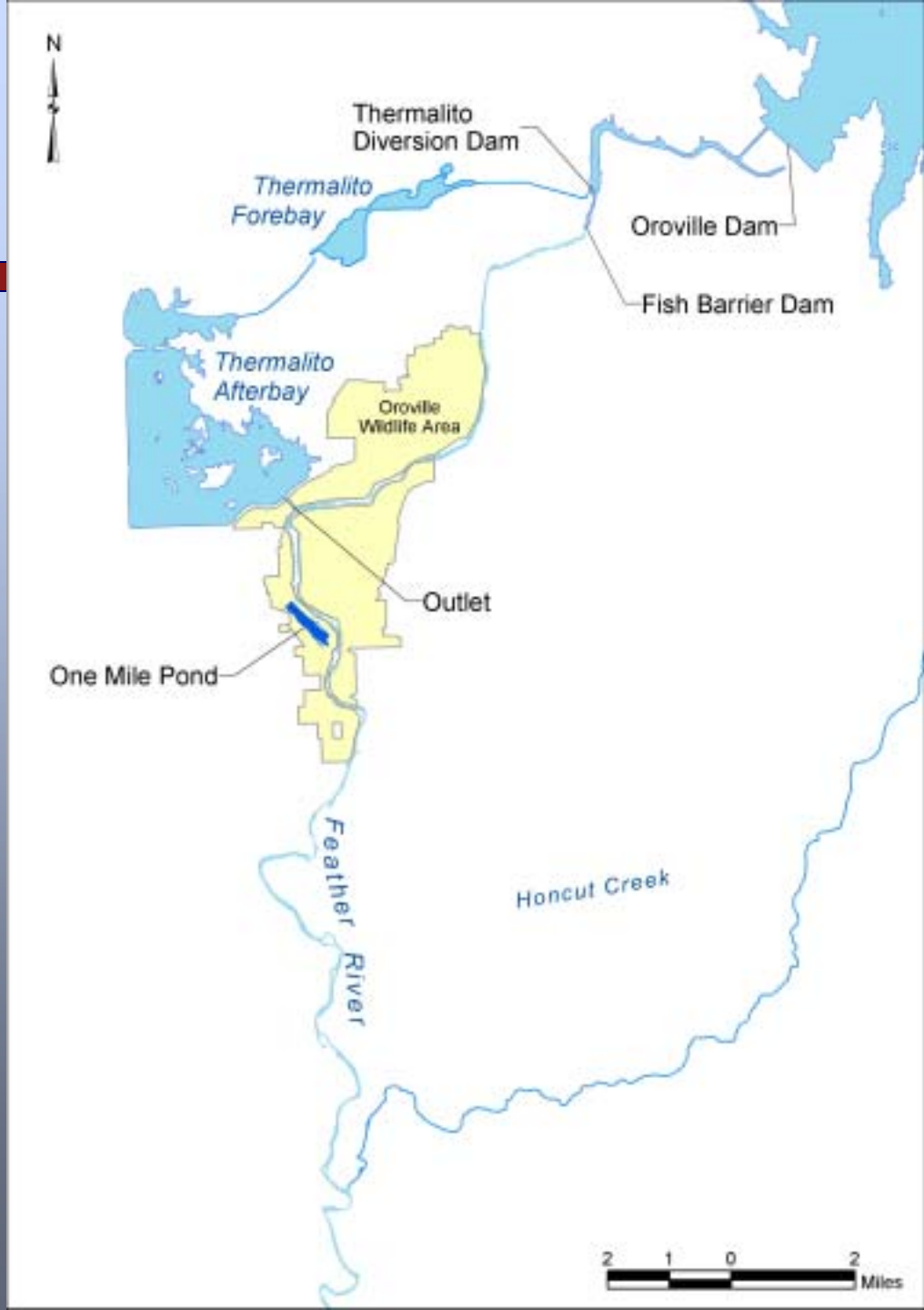
- **Establish a Baseline Inventory of the OWA Resources Using One Mile Pond to Represent Typical Conditions**

Report Overview

- **Analyzed Habitat Suitability for Species Potentially Occurring in One-Mile Pond**
  - **Species found in the lower Feather River**
  - **Species found in One-Mile Pond**
- **Suitable Habitat Exists for Most Warmwater Species with the Potential to Occur in One-Mile Pond**

Introduction
Study Area

- **One-Mile Pond**
  - **Within the OWA**



Methodology
Study Design

- **Identify Species with Potential to Occur**
  - **Warmwater species routinely found in the lower Feather River**
  - **Popular introduced sport fish**
  - **Other native and introduced species**
  - **Species inhabiting One-Mile Pond**





Methodology
Study Design (cont.)

- **Literature Review**
  - **To determine habitat requirements and tolerance ranges**
- **Analysis**
  - **Compare habitat requirements to available habitat**

Methodology
Data Collection

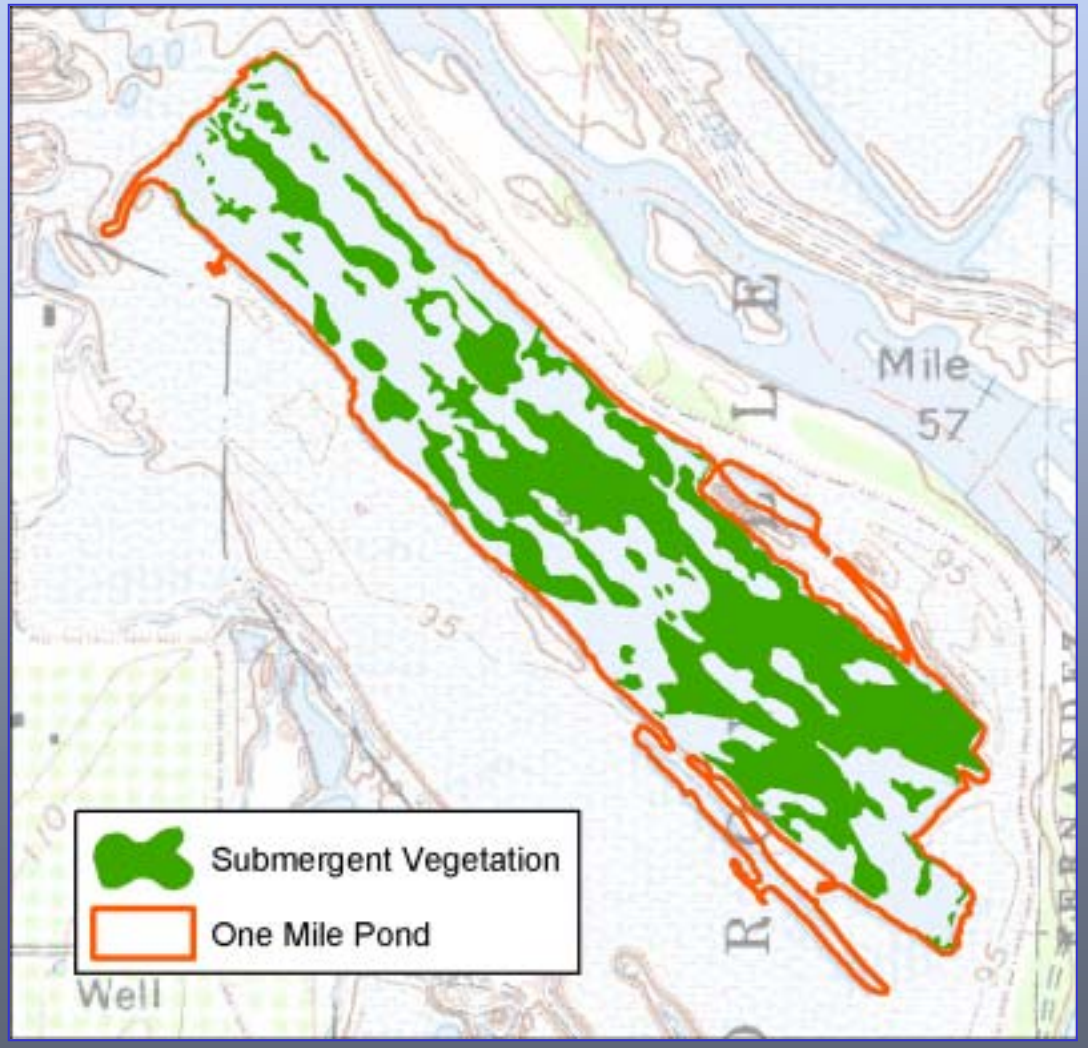
- **Fish Species Composition**
  - **One-Mile Pond**
    - **Three electrofishing sampling efforts**
    - **Anecdotal angler reports**
  - **Robinson's Pond**
    - **One electrofishing sampling effort**
  - **SP-F3.1 Task 5A Report**
    - **Fish Species Composition in One Mile Pond**

Methodology
Data Collection (cont.)

- **Water Quality and Depth**
  - **Sampling conducted by DWR June 2002 through August 2003**
  - **Water quality parameters**
    - **Water temperature**
    - **Dissolved oxygen concentration**

Methodology
Data Collection (cont.)

- **Vegetative Cover**
  - **Mapped by DWR in SP-T4**
  - **Mapped on georeferenced aerial photographs using Arcview software**



Results

- Vegetative Composition
  - Submergent Vegetation – 41 acres
  - Emergent Vegetation – 36 acres
- Water Quality and Depth
  - Water Temperature
    - 9.9°C - 31.8°C
  - Dissolved Oxygen Concentration
    - 0.0 mg/L - 12.9 mg/L
  - Depth
    - Variable but generally between 3 and 4 meters deep

Results
Fish Species

Species	Suitable Habitat	Present
Sacramento pikeminnow	Suitable habitat likely exists year-round	No
Hardhead	Spawning habitat likely does not exist	Yes
Sacramento splittail	Suitable habitat likely exists year-round	No
Sacramento blackfish	Suitable habitat likely exists year-round	Yes
Sacramento sucker	Suitable habitat likely exists year-round	Yes
River lamprey	Spawning habitat likely does not exist	No
Pacific lamprey	Suitable habitat likely exists at some times	No
Tule perch	Suitable habitat likely exists at some times	No
Green sturgeon	Spawning habitat likely does not exist	No
White sturgeon	Suitable habitat likely exists at some times	No
Prickly sculpin	Suitable habitat likely exists year-round	Likely
Riffle sculpin	Suitable habitat likely does not exist	Not Likely
Common Carp	Suitable habitat likely exists year-round	Yes
Golden Shiner	Suitable habitat likely exists year-round	Yes

Results
Fish Species

Species	Suitable Habitat	Present
Wakasagi	Suitable habitat likely exists year-round	No
Spotted bass	Suitable habitat likely exists year-round	No
Largemouth bass	Suitable habitat likely exists year-round	Yes
Smallmouth bass	Suitable habitat likely exists year-round	No
Redeye bass	Suitable habitat likely exists year-round	No
Bluegill	Suitable habitat likely exists year-round	Yes
Green sunfish	Suitable habitat likely exists year-round	Yes
Redear sunfish	Suitable habitat likely exists year-round	Yes
Warmouth	Suitable habitat likely exists year-round	Yes
Black crappie	Suitable habitat likely exists year-round	Yes
White Crappie	Suitable habitat likely exists year-round	No
Striped bass	Suitable habitat likely exists year-round	No
American shad	Suitable habitat likely exists at some times	No
Threadfin shad	Suitable habitat likely exists year-round	No
Brown bullhead	Suitable habitat likely exists year-round	Yes

Conclusions

- **Suitable habitat likely exists for most species potentially occurring within One-Mile Pond.**
- **Although encroachment of water primrose has increased over time, warmwater fish species habitat suitability and quality has not been substantially effected in One-Mile Pond.**
- **The quantity of warmwater fish species habitat available may have been affected by water primrose encroachment, but was not evaluated in this report.**